I claim:

1.   A coupler circuit for sampling an output power of a signal from an output power source that delivers the signal to a load, where an output matching network is coupled between the output power source and the load, the coupler circuit comprising:

at least one first sampling element coupled to an output of the output power source for sampling a first portion of the signal;

at least one second sampling element coupled to an output of the output matching network for sampling an second portion of the signal; and

a processor coupled to the at least one first and second sampling elements for determining the output power based at least on the first portion of the signal and the second portion of the signal.

2.   A coupler circuit according to claim 1, wherein the first sampling element and the second sampling element are capacitors.

3.   A coupler circuit according to claim 1, wherein the first sampling element is a resistor and the second sampling element is a capacitor.

4.   A coupler circuit according to claim 1, wherein at least one of the first and second sampling elements is a resistor.

5.   A coupler circuit according to claim 1, wherein at least one of the firs and second sampling element is a resistor network.

6.   A coupler circuit according to claim 1, wherein the output power source is a power amplifier.

7.   A coupler circuit according to claim 1, wherein the load has a varying load impedance.

8.   A coupler circuit according to claim 1, wherein the output matching network is a circuit defined by a set of S-parameters.

9.   A coupler circuit according to claim 8, wherein the processor includes a first input for receiving a set of S-parameter coefficients.

10.   A coupler circuit according to claim 9, wherein the processor determines a correction for a reflectance from the load based on the first portion of the signal, the second portion of the signal and the set of S-parameter coefficients.

11.   A coupler circuit according to claim 1, wherein the first portion of the signal is a voltage and the second portion of the signal is a voltage.

12.   A coupler circuit according to claim 1, wherein at least one of the first portion of the signal and the second portion of the signal is a current.

13.   A coupler circuit according to claim 1, wherein the load is a variable load antenna.

14.   A system for measuring the output power of a signal provided from an output power source that delivers the signal to a load, the system comprising:

    a. an output matching network coupled between the output power source and the load;

    b. a coupler in signal communication with the output matching network comprising

(1) at least one first sampling element coupled to an output of the output power source for sampling a first portion of the signal;

(2) at least one second sampling element coupled to an output of the output matching network for sampling an second portion of the signal;

c. a detector circuit coupled to the at least one first sampling element and the at least one second sampling element for measuring the first portion of the signal and the second portion of the signal; and

d. a processor coupled to the detector circuit for determining the output power based at least on the first portion of the signal and the second portion of the signal.

15.   A system according to claim 14, wherein the first sampling element and the second sampling element are capacitors.

16.   A system according to claim 14, wherein the first sampling element is a resistor and the second sampling element is a capacitor.

17.   A system according to claim 14, wherein at least one of the first and second sampling elements is a resistor.

18.   A system according to claim 14, wherein at least one of the first and second sampling elements is a resistor network.

19.   A system according to claim 14, wherein the output power source is a power amplifier.

20.   A system according to claim 14, wherein the load has a varying load impedance.

21.   A system according to claim 14, wherein the load is a variable load antenna.

5   22.   A system according to claim 14, wherein the output matching network is a circuit defined by a set of S-parameters.

23.   A system according to claim 22, wherein the processor includes a first input for receiving a set of S-parameter coefficients

10   24.   A system according to claim 23, wherein the processor determines a correction for a reflectance from the load based on the first portion of the signal, the second portion of the signal and the set of S-parameter coefficients.

15   25.   A system according to claim 14, wherein the first portion of the signal is a voltage and the second portion of the signal is a voltage.

26.   A system according to claim 14, wherein at least one of the first portion of the signal and the second portion of the signal is a current.

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